

Appl. No. To Be Assigned; Group Art Unit: To Be  
Assigned; Inventors: Michelle M. Hanna.; Tel:  
202.371-2600  
Title: Molecular Detection Systems Utilizing  
Reiterative Oligonucleotide Synthesis

ATATACGGGCTACAAGGTTAAGTCAACAGGGATTGAAATATAACTTTAAACAGAGCTGGATTATCCAGT  
AGGCAGATTAAGCATGTGCTTAAGGCATCAGCAAAGTCTGAGCAATCCATTTTTTAAACGTAGTACATGTTTT  
TGATAAGCTTAAAAAGTAGTAGTCACAGGAAAAATTAGAACTTTTACCTCCTTGCGCTTGTTATACTCTTTAGT  
GCTGTTTAACTTTTCTTTGTAAGTGAGGGTGGTGGAGGGTGCCATAATCTTTTACGGGAGTAAGTTCTTCTT  
GGTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTGAGACCAAGTTTCGCTCTTGCTCTCCAGGCTGGAGTGCAA  
TGGCGCGATCTCGGCTCACTGCAACCTCCGCTTCTCCTGGGTCAAGCGATTCTCTACATCAGCCTCCGA  
GTAGCTGGGATTACAGGCATGCGCCACCAAGCCCCGCTAATTTTGTATTTTGTAGTAGAGACAGGGTTTCGC  
CATGTTGGTCAGGCTTGCTCGAACTCCTGGCTCAGGTGATCCGCTGTCTCGGCTCCAGAAATGCTGG  
GATTATAGACGTGAGCCACCGCATCCGACTTTCTTTTATGTAATAGTGATAATTCTATCCAAAGCATTTTTT  
TTTTTTTTTGTAGTCGGAGTCTCATTCTGTCAACCAGGCTGGAGGGTGGTGGCGCATCTCGGCTTACTGCAA  
CCTCTGCCTCCCGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGAATTACACACGTGCGCCA  
CCATGGCCAGCTAATTTTTGTATTTTGTAGTAGAGACGGGTGTCAACATTTTGGCCAAGCTGGCCTCGAACTC  
CTGACCTCAGGTGATCTGCCCGCTCGGCTTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCGCTCCT  
GCTCCAAAGCATTTTCTTTCTATGCCTCAAAACAAGATTGCAAGCCAGTCTCAAGCGGATAATTCAAGAGC  
TAACAGGTATTAGCTTAGGATGTGTGGCACTGTTCTTAAGGCTTATATGTATTAATACATCATTTAAACTCACA  
ACAACCCCTATAAAGCAGGGGGCACTCATATTCCTTCCCTTTTATAATTACGAAAAATGCAAGGTATTTTC  
AGTAGGAAAGAGAAATGTGAGAAGTGTGAAGGAGACAGGACAGTATTTGAAGCTGGTCTTTGGATCACTGTG  
CAACTCTGCTTCTAGAACACTGAGCACTTTTCTGGTCTAGGAATTATGACTTTGAGAATGGAGTCCGTCTT  
CCAATGACTCCCTCCCATTTTCTATCTGCCTACAGGCAGAAATCTCCCCGTCCGTATTAATAAACCTCA  
TCTTTTCAGAGTCTGCTCTTATACCAGGCAATGTACAGTCTGAGAAACCTTGCCCCAGACAGCCGTTTTAC  
ACGCAGGAGGGGAAGGGGAGGGGAAGGAGAGAGCAGTCCGACTCTCCAAAAGGAATCCTTTGAACTAGGG  
TTTCTGACTTAGTGAACCCCGCTCCTGAAAATCAAGGGTTGAGGGGTAGGGGGACACTTTCTAGTCGTA  
CAGGTGATTTGATTTCTCGGTGGGCTCTACAACAGGAAAGAAATAGTTTGCTTTTCTTATGATTAAGGA  
AGAAGCCATACTTCCCTATGACACCAACACCCGATTCAATTTGGCAGTTAGGAAGGTTGTATCGCGGAG  
GAAGGAAACGGGGCGGGGCGGATTTCTTTTAAACAGAGTGAACGCACTCAAACACGCTTTGCTGGCAGG  
CGGGGAGCGCGCTGGGAGCAGGAGCGGAGGGCGGTGTGGGGGAGGTTGGGAGGAGCCAGT  
CCTCCTTCTTGCCAACGCTGGCTCTGGCGAGGGCTGCTTCCGGCTGGTGCCCCGGGGGAGACCCAACC  
TGGGGCGACTTCAGGGGTGCCACATTCGCTAAGTGCTCGGAGTTAATAGCACCTCCTCCGAGCACTCGCTC  
ACGGCGTCCCCTTGCTGGAAGATACCGGGTCCCTCCAGAGGATTTGAGGGACAGGGTCGGAGGGGGC  
TCTTCCGCCAGCACGGAGGAAGAAAGAGGAGGGCTGGCTGGTCACCAGAGGGTGGGGCGGACCGCGT  
GCGCTCGCGGCTGCGGAGAGGGGAGAGCAGGCAGCGGGCGGGGAGCAGCATGGAGCCGGCGGC  
GGGGAGCAGCATGGAGCCTTCGGCTGACTGGCTGGCCACGGCCGGCCCGGGGTGGGTAGAGGAGGT  
GCGGGCGCTGCTGGAGGCGGGGCGCTGCCAACGCACCGAATAGTTACGGTGGAGGCCGATCCAGGT  
GGGTAGAGGGTCTGCAGCGGAGCAGGGGATGGCGGGCACTCTGGAGGACGAAGTTTGAGGGGAATT  
GGAATCAGGTAGCGCTTCGATTCTCCGGAAGGGGAGGCTTCTGGGGAGTTTTCAGAAGGGGTTTGT  
ATCACAGACCTCCTCCTGGCGACGCCCTGGGGGCTTGGGAAGCCAAGGAAGAGGAATGAGGAGCCACGG  
CGTACAGATCTCTGAATGCTGAGAAGATCTGAAGGGGGGAACATATTTGTATTAGATGGAAGTATGCTCTTT  
ATCAGATACAAAATTTACGAACGTTTGGGATAAAAAGGGAGTCTTAAAGAAATGTAAGATGTGCTGGGACTAC  
TTAGCCTCCAATTCACAGATACCTGGATGGAGCTTATCTTTCTTACTAGGAGGGATTATCAGTGGAATCTGT

FIG. 29

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GGTGTATGTTGGAATAAATATCGAATATAAATTTTGATCGAAATTATTCAGAAGCGGCCGGCGCGGTGCCTC  
ACGCCTTGTAATCCCTTCACTTTGGGAGATCAAGCGGGGGGAATCACCTGAGGTCGGGAGTTCGAGACCA  
GCCTGGCCAACAGGTGAAACCTCGCCTCTACTAAAAATACAAAAAGTAGCCGGGGGTGGTGGCAGGCGCCT  
GTAATCCAGCTACTCGGGAGGTTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCTGAGGTTGTAGTGAAC  
AGCGAGATGGAGCCACTTCACTCCAGCCTGGGTGACAGAGTGAGACTTTGTGAAAGAAAGAAAGAGAGAA  
AGAGAGAGAGAAAAATTATTCAGAAGCAACTACATATTGTGTTTATTTTAACTGAGTAGGGCAAATAAATATA  
TGTTTGCTGTAGGAACCTAGGAAATAATGAGCCACATTCATGTGATCATTCCAGAGGTAATATGTAGTTACCAT  
TTTGGGAATATCTGCTAACATTTTTGCTCTTTTACTATCTTTAGCTTACTTGATATAGTTTATTTGTGATAAGAG  
TTTTCAATTCCTCATTTTTGAACAGAGGTGTTTCTCCTCTCCCTACTCCTGTTTTGTGAGGGAGTTAGGGGAG  
GATTTAAAAGTAATTAATACATGGGTAACCTAGCATCTCTAAAATTTGCCAACAGCTTGAACCCGGGAGTTTG  
GCTTTGTAGTCCTACAATATCTTAGAAGAGACCTTATTTGTTTTAAAAACAAAAAGGAAAAAGAAAAGTGGATAG  
TTTTGACAATTTTTAATGGAG

**FIG. 30**

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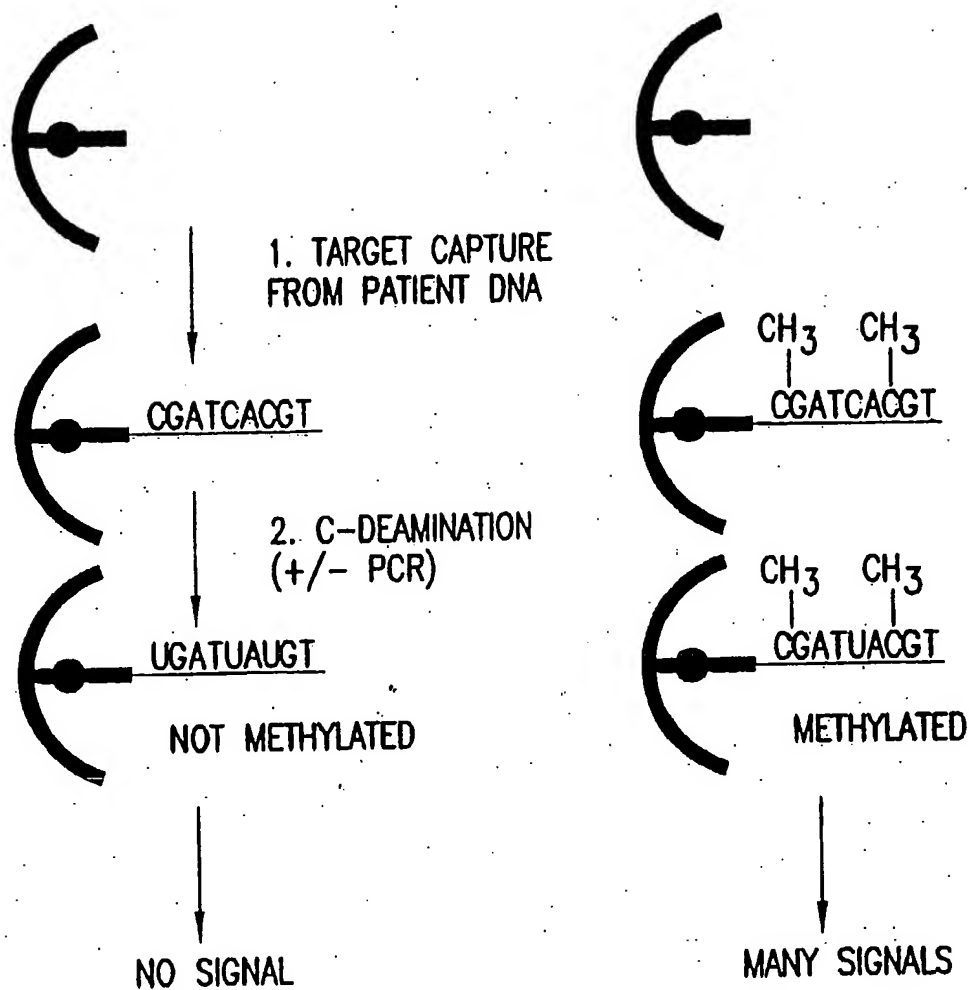


FIG.31